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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,647	05/11/2001	Sahng-ik Jun	06192.0178.NPUS00	5231
7590	01/14/2004		EXAMINER	
McGuireWoods LLP 1750 Tysons Boulevard Suite 1800 McLean, VA 22102-4215			DUONG, THOI V	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/852,647

Applicant(s)

JUN, SAHNG-IK

Examiner

Thoi V Duong

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 ~~is/are~~ are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-34 ~~is/are~~ are allowed.
- 6) ☒ Claim(s) 1-9 and 35-38 ~~is/are~~ are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This office action is in response to the Reply filed October 10, 2003.

Currently, claims 1-38 are pending in this application.

#### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-9 and 35-38 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 recites the limitation "the same layer " in line 11 of the claim. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 35 recites the limitation "the same layer " in line 8 of the claim. There is insufficient antecedent basis for this limitation in the claim.

6. Claims 1 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear how, in the liquid crystal display device, the light interception pattern (or the light interceptor) and the semiconductor pattern (or the semiconductor layer) have the same layer. Although they are formed of the same layer during manufacturing process, the light interception pattern and the semiconductor pattern are two separate patterns in the device. Claims 2-9 and 36-38 are also rejected since they are dependent on the indefinite claims.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1-9 and 35-38 stand rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (USPN 6,466,289 B1).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As shown in Figs. 6 and 7, Lee et al. discloses a liquid crystal display (LCD), comprising (col. 2, lines 21-43):

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a plurality of gate lines 20 formed on a substrate;

a plurality of second data lines 80 insulated from and crossing over said plurality of gate lines;

a plurality of pixel regions defined by the crossing of said plurality of gate lines and said plurality of data lines ;

a common electrode or a field-generating electrode 12 formed in each pixel region having a portion laterally spaced apart from said data line with a gap therebetween;

a pixel electrode 65 formed in each pixel region, spaced apart from said common electrode with a predetermined distance therebetween;

a thin film transistor provided to each pixel region and including a semiconductor pattern 40 (col. 3, lines 61-64); and

a light interception pattern 64 of a first data line 60 formed of the same layer as the semiconductor pattern on a gate insulating layer 30 and overlapping the gap,

wherein the light interception pattern is overlapped with the corresponding data line, and the common electrode close to the corresponding data line 60 (Fig. 7);

wherein the light interception pattern is overlapped with the common electrode 12;

wherein the semiconductor pattern is connected to the corresponding light interception pattern via a source electrode 61 (Fig. 3);

wherein the semiconductor pattern is extended to the bottom of the corresponding data line 80 (Fig. 6)

wherein the common electrodes are formed at the same plane as the gate lines  
(col. 3, lines 14-29);

where the pixel electrode is formed on the same plane as the first data line 60;

wherein the pixel electrode are formed at the plane different from the second  
data lines 80;

wherein the light interception pattern 64 is wider than the data line 80; and

wherein the light interception pattern is extended to the periphery of the  
corresponding data line 80.

As to the product-by-process limitation “a light interception pattern formed of the same layer as the semiconductor pattern” of claims 1 and “a light interceptor made of the same layer as the semiconductor layer” of claim 35, it has been recognized that “Even through product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process”. *In re Thorpe*, 227 USPQ 964,966 (Fed. Cir. 1985). See also MPEP 2113.

***Allowable Subject Matter***

9. Claims 10-34 are allowed.

The following is an examiner's statement of reasons for allowance:

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None of the prior art of record suggests or discloses that a liquid crystal display comprises *"a light interception pattern formed of the same material as said semiconductor pattern on the gate insulating layer."*

The most revelant reference, USPN 5,247,289 of Matsueda, fails to disclose or suggest a light interception pattern formed of the same material as the semiconductor pattern. The Matsueda's reference discloses a portion of an amorphous silicon layer formed on top of a common electrode; however, this portion does not function as a light intercepting pattern.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (703) 308-3171. The examiner can normally be reached on Monday-Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (703) 305-3492.

Thoi Duong



01/09/2004

  
ROBERT H. KIM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY GROUP